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09/862,949	05/22/2001	Brian M. Hackworth	112056-0012	9748

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EXAMINER

KE, PENG

ART UNIT PAPER NUMBER

2174

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/862,949	HACKWORTH, BRIAN M.	
	Examiner	Art Unit	
	Peng Ke	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to communications: Amendment filed on 1/21/2006.

This action is made Final.

Claims 1-53 are pending in this application. Claims 1, 14, 19, 25, 26, 29, 35, 39, 46, and 53 are independent claims.

Since the applicant fails to traverse the examiner's assertion of official notice, official notice is taken as admitted prior art.

Claim Rejections - 35 USC # 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 8, 13-16, 19, 23, 25-27, 29, 32-36 and 38-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Chu et al (hereinafter Chu), US-6,346,954.

As per claim 1, Chu teaches a system for reporting information related to predetermined storage volumes in a network the system including at least one storage appliance comprising:

a monitor process that identifies volumes (accessible/inaccessible capacities) and retrieves statistical information with respect to the volumes, each volume including a cluster of physical storage disks and defining a logical arrangement of storage space; (figure 7, items 106, 108, and 110)

an interface adapted to enable volumes to be associated with a group, the group independent of a physical arrangement of physical storage disks in the network; (figure 7, item 90 “array A” column 8, lines 46-55) and

and a reporting process that organizes and displays the statistical information with respect to the volumes associated with the group to interested parties (col. 1 , lines 8- 15, col. 8, line 47- col. 9, line 8).

As per claim 2, which is dependent on claim 1, Chu teaches claim 1, Chu further teaches the system wherein the reporting process includes an event process for determining identities of the interested parties with respect to the volumes associated with the group to interested parties (col. 7, line 66-co1. 8, line 12) (RAID groups, physical drives divided into arrays, Fig. 8).

As per claim 3, which is dependent on claim 2, Chu teaches claim 2. Chu further teaches the system wherein the event conditions include parameters of the volume and an associated device of the volume that exceed threshold levels (unusable/usable space) (col. 7, lines 20-3 1).

As per claim 4, which is dependent on claim 3, Chu teaches claim 3. Chu further teaches the system wherein the parameters include at least one of a central processing utilization level, a storage disk free space, a storage disk used space, or an environmental condition and operational status (col. 7, lines 52-65).

As per claim 7, which is dependent on claim 3, Chu teaches claim 3. Chu further teaches the system further comprising a database that retains information with respect to the interested parties and the threshold levels for the parameters (data stored on disk and on mirror disk) (col. 2, lines 24-36).

As per claim 8, which is dependent on claim 1, Chu teaches claim 1. Chu further teaches the system wherein each of the volumes are attached to each of a plurality of filers respectively (Fig. 3, 42, 44, 46).

As per claim 13, which is dependent on claim 1, Chu teaches claim 1. Chu further teaches the system wherein the reporting process is adapted to consolidate the statistical information from one or more volumes on one or more of the volumes on one or more storage appliances into the group (data distribution mode) (col. 7, 39-52).

As per claim 14, Chu teaches a graphical user interface for use with a management station or client personal station attached to a network having storage volumes, the graphical user interface comprising:

a display window that enables at least one of the volumes to be selectively associated with a desired group of interested parties, each volume including a luster of physical storage disks and defining a logical arrangement of storage space (figure 7, items 106, 108, and 110) and

a display window that shows information related to performance and status of the volumes of the group based upon criteria selected by the user (figure 7, item 90 "array A" column 8, lines 46-55).

As per claim 15, which is dependent on claim 14, Chu teaches claims 14. Chu further teaches the graphical user interface wherein the information

includes at least one of central processing unit usage, volume disk free space, volume disk used space; environmental conditions; general operational status and events in which an operation parameter exceeds a predetermined threshold (operational status) (col. 12, lines 35-44).

As per claim 16, which is dependent on claim 14, Chu teaches claims 14. Chu further teaches the graphical user interface wherein the events include alerts that are color-coded based upon severity of a problem (indicator in the form of icon, text, and/or altered shading) (col. 10, lines 2-13).

As per claim 19, Chu teaches a method for reporting information related to predetermined storage volumes in a network, each volume including a cluster of physical storage disks and defining a logical arrangement of storage space, the method including at least one storage appliance comprising:

Identifying volumes and retrieving statistical information with respect to the volumes, each volume including a cluster of physical storage disks and defining a logical arrangement of storage space; (figure 7, items 106, 108, and 110)

Associating at least one of the identified volumes with a group, the group independent of a physical arrangement of physical storage disks in the networks; (figure 7, item 90 "array A" column 8, lines 46-55) and

Organizing and displaying the statistical information with respect to the volumes associated with the group to interested parties. (col. 8, line 66-col. 9, line 8).

As per claim 23, which is dependent on claim 19, Chu teaches claim 19. Chu further teaches the method wherein the step of organizing and displaying includes displaying event information related to predetermined statistical information that exceeds desired parameters (physical drive failure may be indicate) (l. 9, lines 61-col. 10, lines 1-5).

As per claim 25, Chu teaches a computer readable medium operating on a computer in a network that includes one or more storage appliances having volumes, the computer readable medium including program instruction for performing the steps of:

identifying storage volumes and retrieving statistical information with respect to the volumes, each volume including a luster of physical storage disks and defining a logical arrangement of storage space; (figure 7, items 106, 108, and 110)

associated at least one of the identified volume with a group, the group independent of a physical arrangement of physical storage disks in the network; (figure 7, item 90 “array A” column 8, lines 46-55) and

organizing and displaying the statistical information with respect to the volumes associated with the group to interested parties (col. 1, lines 8-15, col. 8, line 47-col. 9, line 8).

As per claim 26, Chu teaches a method for organizing and displaying information with respect to one or more volumes on one or more storage appliances attached to a network, the method comprising the steps of:

establishing a group of one or more of the volumes based upon predetermined reporting criteria, (figure 7, item 90 “array A” column 8, lines 46-55) each volume including a cluster of physical storage disks and defining a logical arrangement of storage space, each volume having statistical information associated therewith; (figure 7, items 106, 108, and 110) and

consolidating the statistical information collected with respect to the volumes in the group for display to interested parties (Fig. 4-7, col. 10, lines 34-45).

As per claim 27, Chu teaches the method further comprising known predetermined threshold values to parameters of the statistical information generating an event condition when

the at least one of the parameters exceeds at least one of the threshold values, respectively (col. 8, line 66-col. 9, line 8).

As per claim 29, it is of the same scope as claim 25. Supra.

As per claim 32, it is of the same scope as claim 14. Supra.

As per claim 33, it is of the same scope as claim 7. Supra.

As per claim 34, it is of the same scope as claim 16. Supra.

As per claim 35, it is rejected with the same rationale as claim 26. Supra.

As per claim 36, it is of the same scope as claim 7. Supra.

As per claim 38, Chu teaches claim 1, Chu further teaches the reporting process is configured to consolidate the statistical information collected with respect to each of the volumes in the group to form a single set of statistical information descriptive of the group, for display to interested parties. (figure 5, item 76)

As per claim 39, Chu teaches a method of organizing and displaying information regarding storage devices attached to a computer network:

Organizing at least a portion of storage space on first physical storage devices to form a first logical arrangement of storage space; (figure 7, items 106, 108, and 110)

Organizing at least a portion of storage space on second physical storage devices to form a second logical arrangement of storage spaces. (figure 7, items 106, 108, and 110)

Establishing a group that includes at least the first and the second logical arrangements of storage space, the group independent of a physical arrangement of the first and the second physical storage devices in the computer network. (figure 7, item 90 "array A" column 8, lines 46-55)

Consolidating statistical information that describes the first and second logical arrangement of storage space to form a single set of statistical information descriptive of the group; (col. 1 , lines 8- 15, col. 8, line 47-col. 9, line 8) and

Displaying the set of statistical information to a user. (col. 1 , lines 8- 15, col. 8, line 47-col. 9, line 8).

As per claim 40, Chu teaches method of claim 39, Chu further teaches the first physical storage devices and the second physical storage devices are different arrays of physical storage devices. (column 7, lines 65-column 8, lines 19, figure 5, items 79 and 80)

As per claim 41, Chu teaches method of claim 39, Chu further teaches the first physical storage devices and the second physical storage devices are the same arrays of physical storage devices. (column 7, lines 65-column 8, lines 19, figure 5, item 79)

As per claim 42, Chu teaches method of claim 40, Chu further teaches wherein the arrays of physical storage devices each comprise a Redundant Array of Independent Disks (RAID). (column 5, lines 57-column 68)

As per claim 43, Chu teaches method of claim 39, Chu further teaches the first logical arrangement of storage space is associated with a first storage appliance and the second logical arrangement of storage space is associated with a second storage appliance. (figure 7, items 94, 96, 98, 100, 102)

As per claim 44, it is of the same scope as claim 2. Supra.

As per claim 45, Chu teaches method of claim 39, Chu further teaches the logical arrangement of storage space are volumes. (figure 7, items 106, 108, and 110)

As per claim 46, it is rejected with the same rationale as claim 1. Supra.

As per claim 47, it is of the same scope as claim 38. Supra.

As per claim 48, Chu teaches the method of 46, Chu further teaches the group includes logical arrangement of storage space each organized from differing arrays of physical storage devices. (column 7, lines 65-column 8, lines 19, figure 5, items 79 and 80)

As per claim 49, it is of the same scope as claim 42. Supra.

As per claim 50, Chu teaches the method of 46, Chu further teaches the logical arrangement of storage space are associated with different storage appliances. (figure 7, items 106, 108, and 110)

As per claim 51, it is of the same scope as claim 2. Supra.

As per claim 52, it is of the same scope as claim 45. Supra.

As per claim 53, it is rejected with the same rationale as claim 53. Supra.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6, 9-12, 17-18, 20-22, 24, 28, 30, 31, and 37 are rejected under 35 USC 103(a) over Chu et al. (hereinafter Chu), 175-,346,954.

As per claim 5, Chu teaches the system of claim 1 but does not teach the system wherein the event process included is adapted to e-mail event information to at least some of the interested parties. However, Official Notice is taken that using electronic messages is very well

known in the art therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use electronic messages as a means of notification in order to both log the notification in the form of an e-mail and provide instant notification to the user.

As per claim 6, Chu does not teach the system wherein the e-mail of the event information includes web links for use by the interested parties. However, Official Notice is taken that relaying web links to users through e-mail is well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the use of web links in order to provide a greater wealth of information to users.

As per claim 9, Chu teaches the system comprising a command process that reports the statistical information to at least some of the interested parties (col. 4, lines 28-31, operational status. Chu does not teach process of generating web pages. However, Official Notice is taken that generating web pages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the process of generating web pages in order to display the statistical information calculated in Chu on a network.

As per claim 10 and 21, Chu teaches the system wherein the graphical user interfaces enable display of the statistical information in a plurality of predetermined windows and boxes within the windows based upon selection criteria entered by the interested parties (in response to user selections) (col. 3, lines 38-58) Fig. 6). Chu does not teach process of generating web pages. However, Official Notice is taken that generating web pages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the process of generating web pages in order to display the statistical

information calculated in Chu on a network.

As per claim 11, Chu teaches the system comprising alerts displayed on the graphical user interface based upon problems identified by the monitor process with respect to the volumes or devices associated with the volumes (col. 4, lines 15-31).

As per claims 12, Chu teaches the system wherein the alerts are color-coded based upon severity of the problems (indicator in the form of icon, text, and/or altered shading) (col. 10, lines 2-13).

As per claim 17, Chu teaches the method of claims 14 and 15 but does not teach the graphical user interface further comprising a link box that directs a user to network or Internet-based utilities in connection with the information. However, Official Notice is taken that relaying web links with information to users is well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the use of web links in order to provide a greater wealth of information to users.

As per claim 18, Chu does not teach the graphical user interface wherein each display window is formatted as a web page and is displayed on a web browser. However, Official Notice is taken that generating web pages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the process of generating web pages for display in order to provide links through the display window.

As per claim 22, Chu teaches the method further comprising changing the predetermined display format based upon user-selected criteria (col. 8, lines 47-55).

As per claim 24, Chu teaches the method wherein the step of displaying the event information includes providing color-coded alerts that indicated a severity of a problem associated with the respective event (indicator in the form of icon, text, and/or altered shading) (col. 10, lines 2- 13).

As per claim 28, Chu does not teach the method further comprising notifying at least one of the interested parties based upon the event condition using an electronic message. However, Official Notice is taken that using electronic messages is very well known in the art therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use electronic messages as a means of notification in order to both log the notification in the form of an e-mail and provide instant notification to the user.

As per claim 20, it is of the same scope as claim 5. Supra.

As per claim 30, it is of the same scope as claim 5. Supra.

As per claim 31, it is of the same scope as claim 6. Supra.

As per claim 37, it is of the same scope as claim 5. Supra.

Response to Argument

Applicant's arguments filed on 8/18/2004 have been fully considered but they are not persuasive.

Applicant's arguments focused on the following:

A) Chu fails to teach an interface a plurality of selected volumes to be associated with a group, the group independent of a physical arrangement of physical storage disks in the network" and "a reporting process that organizes and displays the statistical information with respect the volume associated with group".

A) The examiner does not agree for the following reasons:

During patent examination, the pending claims must be "given >their< broadest reasonable interpretation consistent with the specification." > In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

In this case, the claim recites a plurality of selected volumes to be associated with a group, the group independent of a physical arrangement of physical storage disks in the network. Chu teaches this limitation because a user can select physical disks ID 1-5 for Array group A. (column 8, lines 47-55) and the selection are independent of a physical arrangement because the physical disks are connected through different channels. (column 8, lines 18-30)

Chu also teaches "reporting process that organizes and displays the statistical information with respect the volume associated with group." The applicant defines statistical information includes operational status. (See Summary of the invention of the applicant's specification) Chu displays to the user the accessibility of each individual logical dives and physical drives. (column 10, lines 13-35)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peng Ke whose telephone number is (571) 272-4062. The examiner can normally be reached on M-Th and Alternate Fridays 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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